iPhone 5s Logic Board Replacement

Use this guide to replace a faulty logic board in your iPhone 5s.

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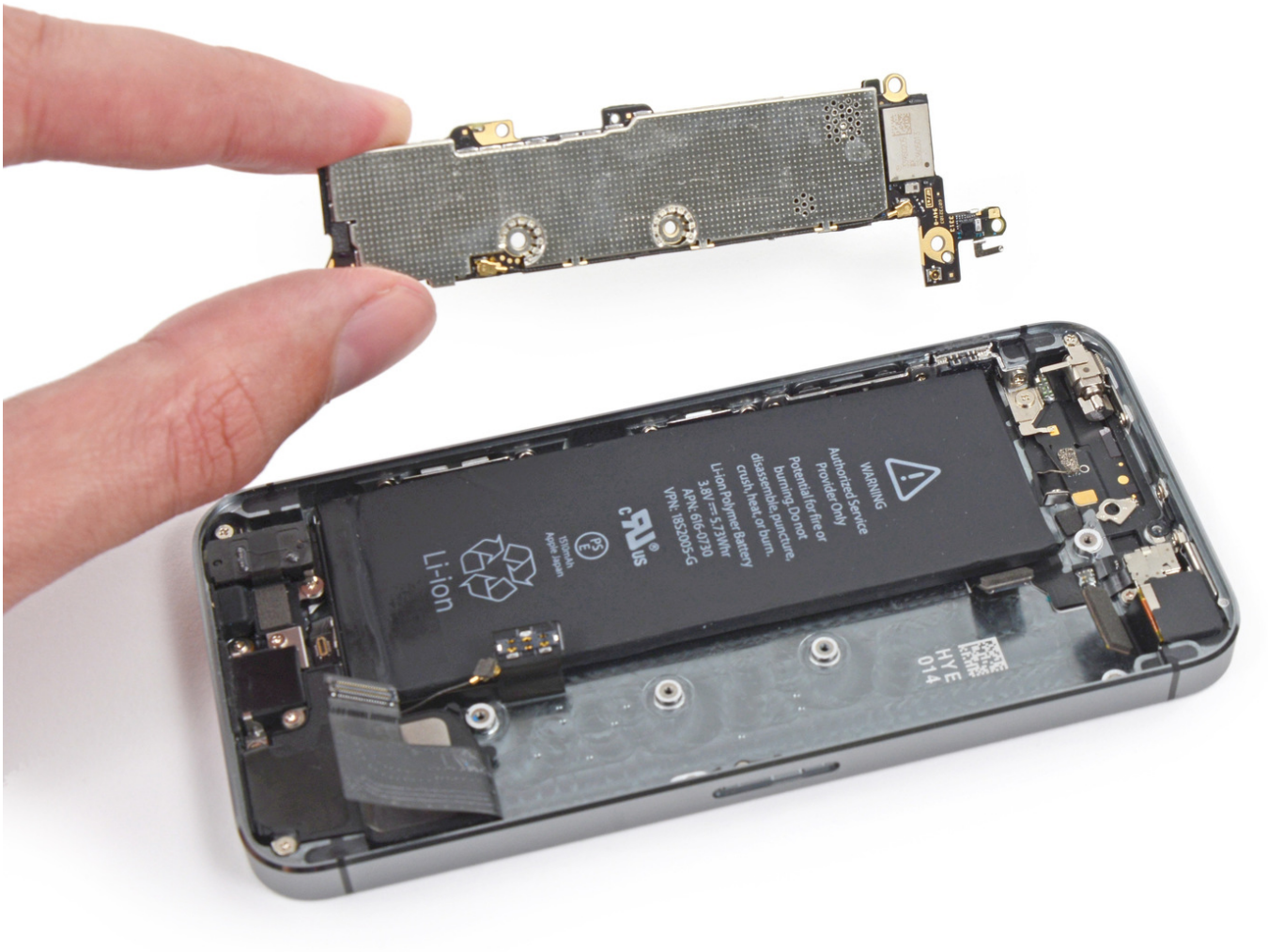


INTRODUCTION

Use this guide to replace a faulty logic board in your iPhone 5s.

It's important to note that each iPhone's logic board and Touch ID fingerprint sensor are paired at the factory, so replacing the logic board will disable Touch ID *unless* you also install a replacement home button that has been properly paired to your new logic board.

[video: https://www.youtube.com/watch?v=WJSK8EP9KDg]

TOOLS:

- P2 Pentalobe Screwdriver iPhone (1)
- iSclack (1)
- iFixit Opening Tools (1)
- Suction Handle (1)
- Spudger (1)
- SIM Card Eject Tool (1)
- 2.5 mm Flathead Screwdriver (1)
- Phillips #000 Screwdriver (1)
- Tweezers (1)

PARTS:

- iPhone 5s Logic Board (1)
- iPhone 5s Logic Board with Paired Home Button (1)

Step 1 — Taping the display glass



- If your display glass is cracked, keep further breakage contained and prevent bodily harm during your repair by taping the glass.
- Lay overlapping strips of clear packing tape over the iPhone's display until the whole face is covered.

ⓘ This will keep glass shards contained and provide structural integrity when prying and lifting the display.

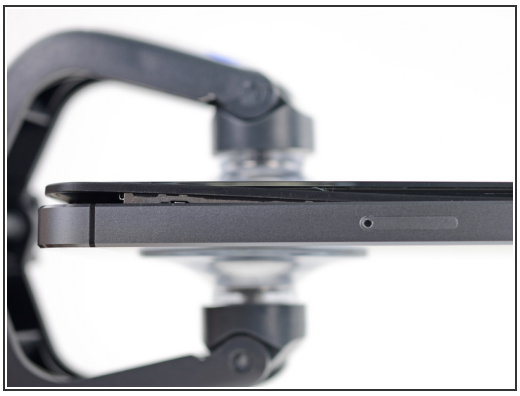
⚠ Wear safety glasses to protect your eyes from any glass shaken free during the repair.

Step 2 — Removing the Pentalobe screws

⚠ Before you proceed, discharge your iPhone battery below 25%. A charged lithium-ion battery can catch fire and/or explode if accidentally punctured.

- Power off your iPhone before beginning disassembly.
- Remove the two 3.9 mm Pentalobe screws from either side of Lightning connector.

Step 3 — How to use the iSclack



In the following steps you will be pulling the display up out of the phone body. The display is composed of a glass screen and a plastic bezel with metal clips.

- Regardless of the tool you use, **you need to be sure you pull up the entire display**.
- If the glass begins to separate from the plastic, as shown in the first image, slide a plastic opening tool between the plastic frame and the metal phone body to pry the metal clips out of the case.

If you are reassembling a phone with a separated display bezel, you may want to place a thin strip of adhesive between the plastic bezel and the glass to keep the phone closed.

Step 4 — Starting the iSclack Opening Procedure



The next two steps demonstrate using the iSclack, a great tool for safely opening the iPhone that we recommend for anyone doing more than one repair. **If you aren't using the iSclack, skip the next two steps.**

- Close the handle on the iSclack, opening the suction-cup jaws.
- Place the bottom of your iPhone in between the suction cups, against the plastic depth gauge.
  - The top suction cup should rest just above the home button.
- Open the handles to close the jaws of the iSclack. Center the suction cups and press them firmly onto the top and bottom of the iPhone.

Step 5 — Finishing the iSclack Opening Procedure

- Hold onto your iPhone securely and close the handle of the iSclack to separate the suction cups, pulling the front panel up from the rear case.
- The iSclack is designed to safely open your iPhone just enough to separate the pieces, but not enough to damage the home button cable.

Peel the two suction cups off your iPhone.

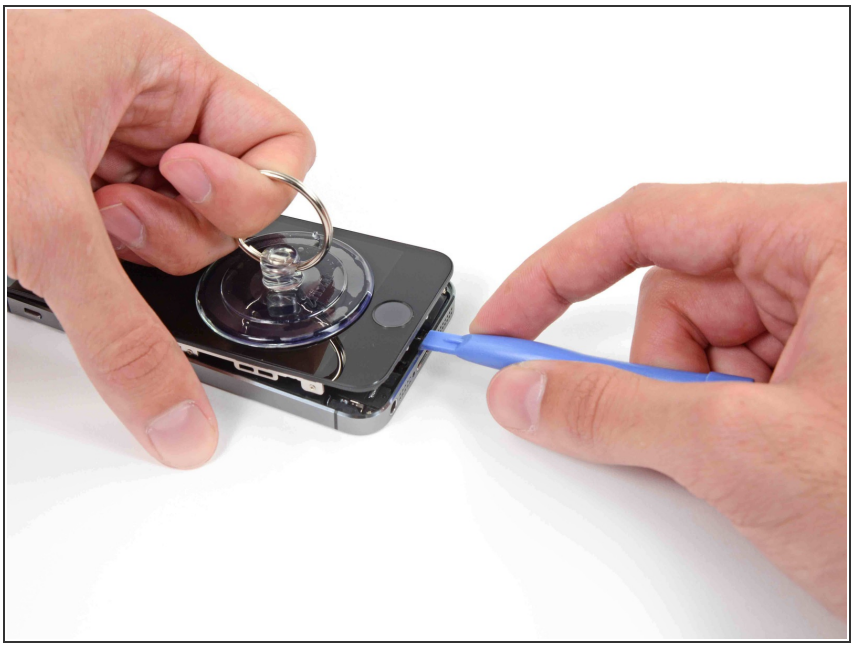
- **Skip the next three steps and continue on Step 9.**

Step 6 — Manual Opening Procedure

- If you don't have an iSclack, use a single suction cup to lift the front panel:
- Press a suction cup onto the screen, just above the home button.

ⓘ Be sure the cup is completely on the screen to get a tight seal.

Step 7 — Start lifting the front panel assembly



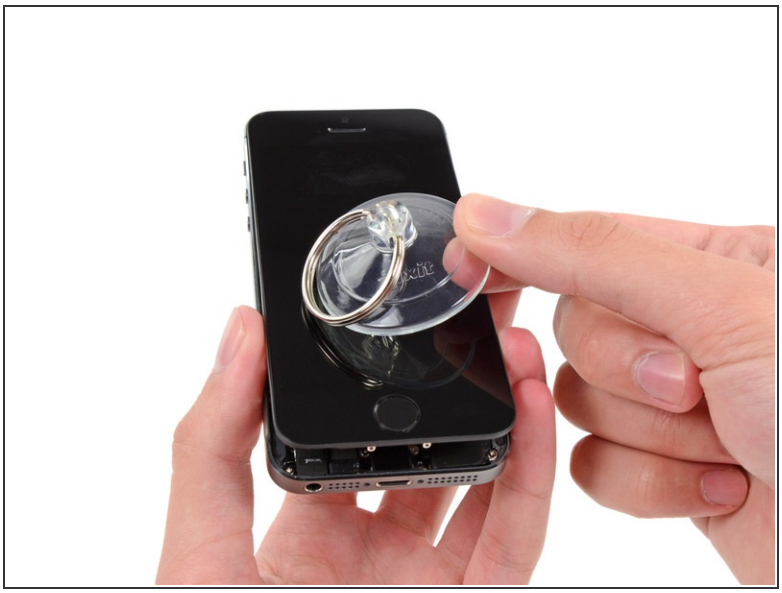
The front panel is attached with clips, and there are several ribbon cables connecting it to the rest of the phone. Your goal here is to release the clips and **open the phone only enough to disconnect the cables**. Go slowly and carefully to avoid damage.

Make sure the suction cup is firmly attached to the front panel assembly near the home button.

- While holding the iPhone down with one hand, pull up on the suction cup to slightly separate the home button end of the front panel from the rear case.
- With a plastic opening tool, gently pry the edges of the rear case down, away from the front panel assembly, while you pull up with the suction cup.

Take your time and apply firm, constant force. The 5s front panel assembly is a much tighter fit than most devices.

Step 8



⚠ Do not try to completely remove the front panel assembly from the rear case, as there are several delicate ribbon cables connecting them.

- Pull the plastic nub to release the vacuum seal on the suction cup.
- Remove the suction cup from the display assembly.

Step 9 — Removing the Touch ID cable bracket



- Open the phone just enough to reveal the metal bracket covering the home button cable.

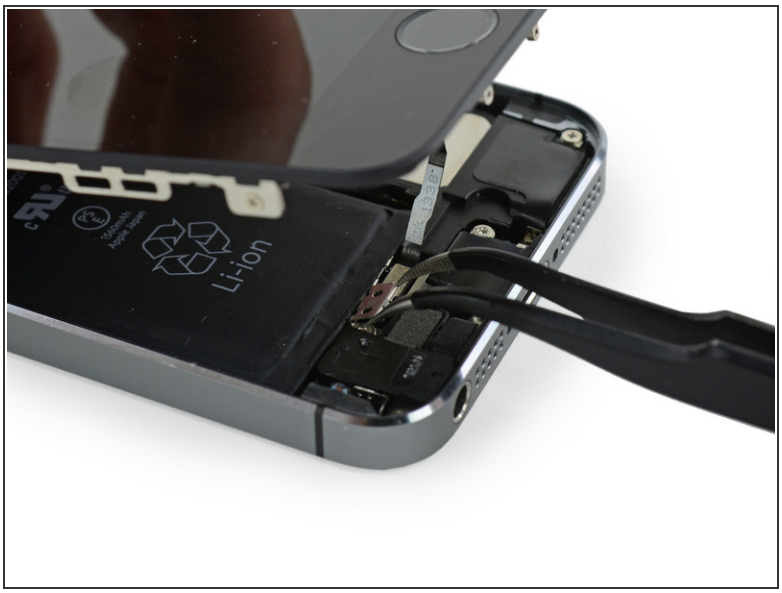
⚠ Do not open the phone too far or you risk damaging the home button cable, or the socket it plugs into. **Keep the cable loose—if it is stretched taut, that's too far.**

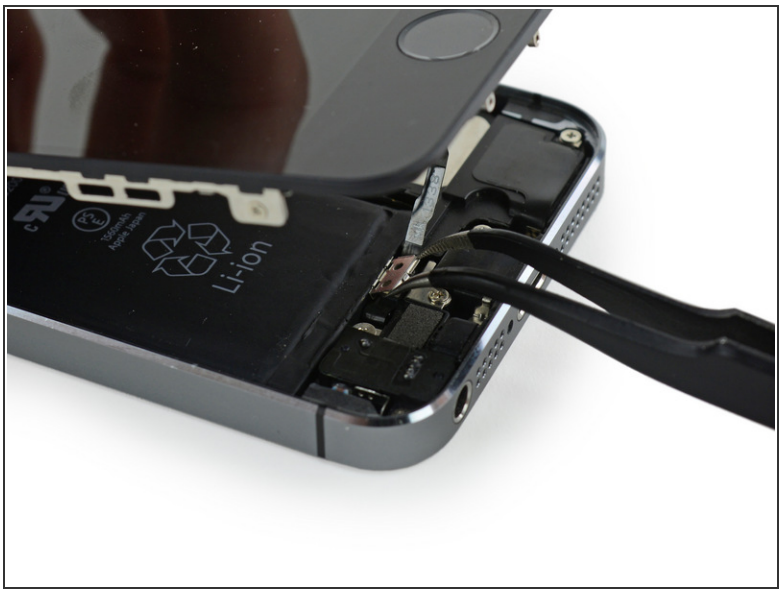
- Only the phone's original home button assembly will be capable of using the Touch ID functionality. **If you rip the cable, installing a new home button will only restore ordinary home button functions, not the Touch ID features.**

- Use the tip of a spudger to push the bracket free and remove it with tweezers.

ⓘ The next two steps apply to reassembly. Skip them and continue to Step 12 until reassembly.

Step 10

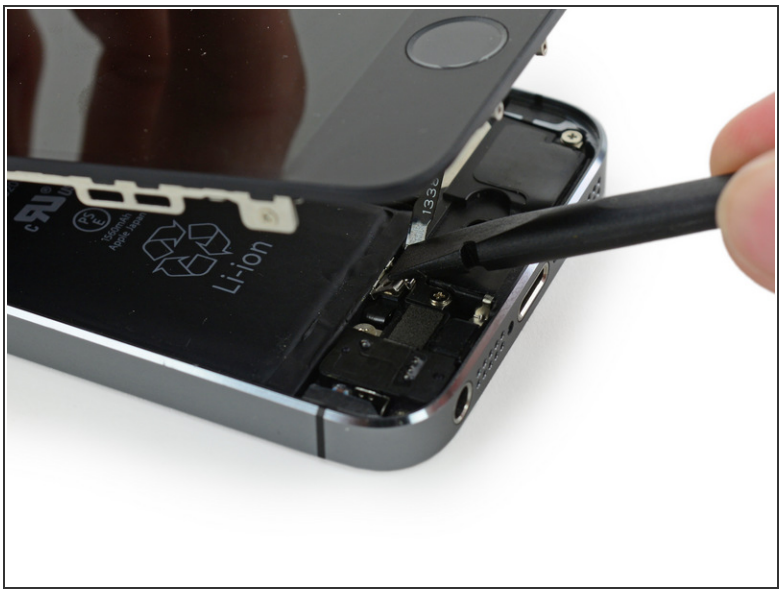


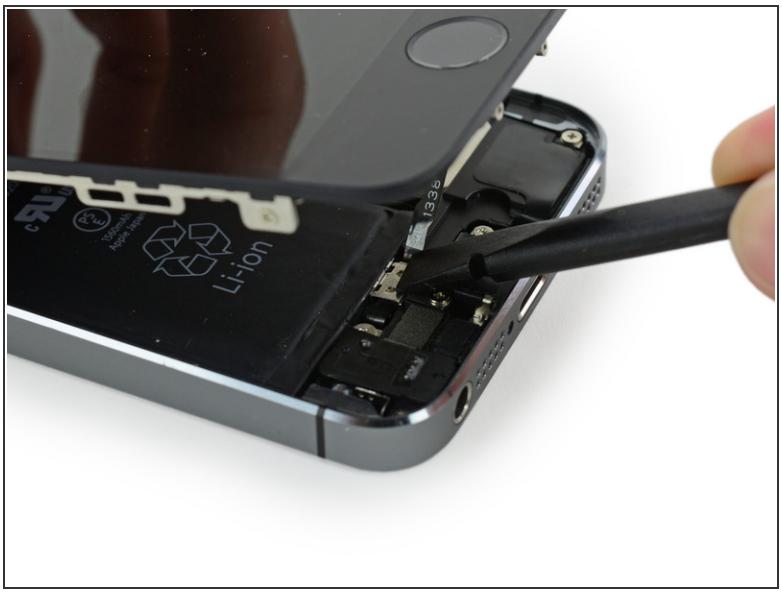


During reassembly, you will need to reinstall the Touch ID cable bracket. The top of the bracket needs to slide between the battery and Touch ID cable connector, and the front must latch down over the connector.

Slide the top of the bracket over the Touch ID cable connector from left to right.

Step 11





- Use the flat end of a spudger to snap the front portion of the Touch ID cable bracket down over the cable connector.

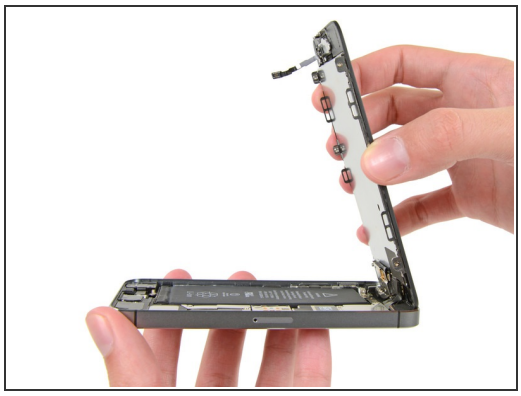
If the bracket does not snap down flush, you may need to remove the bracket and slide it over the cable connector again for a better fit.

Step 12 — Disconnecting the home button cable connector

- Use the tip of a spudger to pry the home button cable connector up out of its socket.

⚠ Be sure you're separating the cable connector from its socket, and not prying the entire socket up. The socket is on its own glued-down cable that can be pried up if you aren't careful.

Step 13 — Opening up the phone



- Once the connector has been released, pull the home button end of the assembly away from the rear case, using the top of the phone as a hinge.
- Open the display to about a 90º angle, and lean it against something to keep it propped up while you're working on the phone.
  - Add a rubber band to keep the display securely in place while you work. This prevents undue strain on the display cables.

In a pinch, you can use an unopened canned beverage to hold the display.

Step 14

- Remove the two 1.6 mm Phillips #000 screws securing the metal battery connector bracket to the logic board.

Step 15

- Remove the metal battery connector bracket from the iPhone.

Step 16

- Use the flat end of a spudger to gently pry the battery connector up from its socket on the logic board.

⚠ Be very careful to only pry up on the battery connector itself and not the socket on the logic board. If you pry up on the logic board socket, you may break the connector entirely.

Step 17

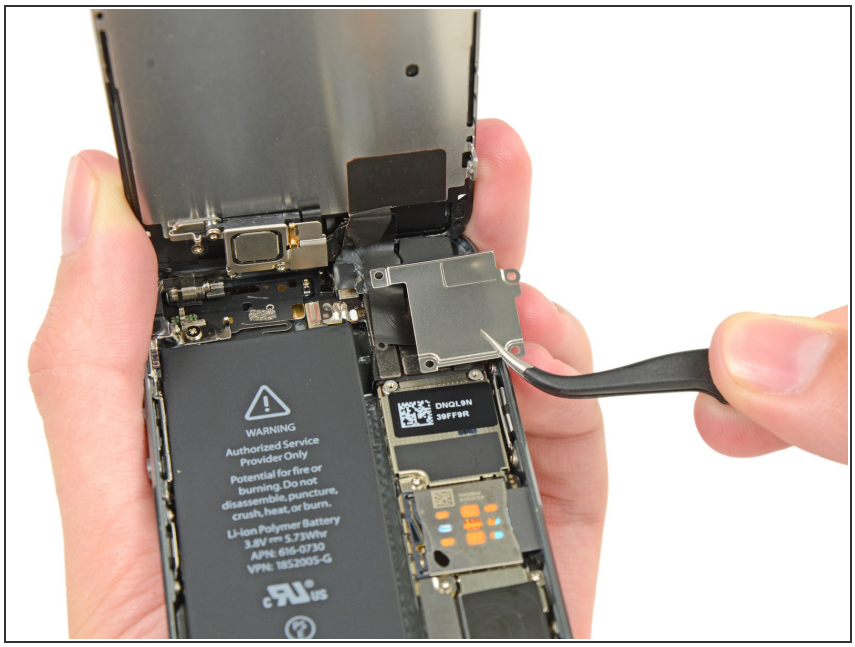
- Remove the following screws securing the front panel assembly cable bracket to the logic board:
  - One 1.7 mm Phillips #000 screw
  - One 1.2 mm Phillips #000 screw
  - One 1.3 mm Phillips #000 screw
  - One more 1.7 mm Phillips #000 screw

    This 1.7 mm screw tends to not be attracted to a magnetized screwdriver. Take care not to lose it when removing.

It is especially important to keep track of your screws in this step for reassembly. Accidentally using the 1.3 mm screw or one of the 1.7 mm screws in the bottom right hole will result in significant damage to the logic board causing the phone to no longer boot properly.

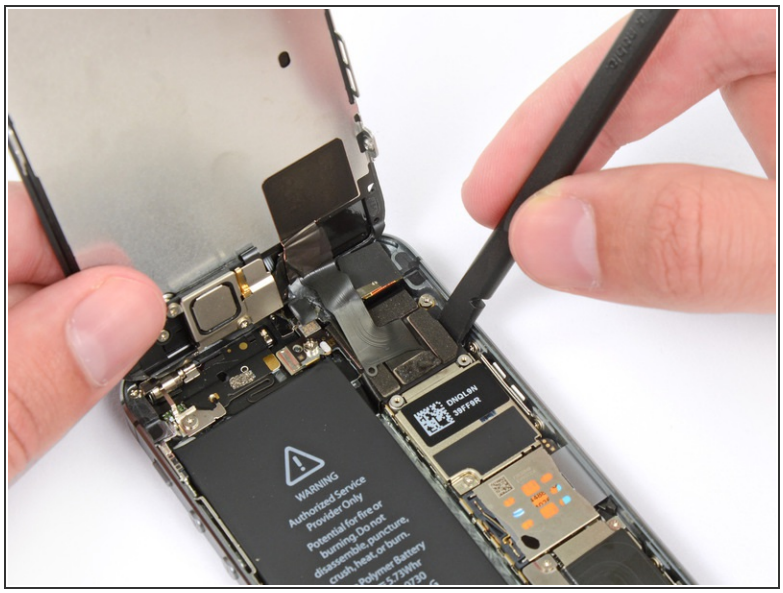
Be careful not to over-tighten the screws, and don't force them. If they don't fit easily when you are securing them, they may be the wrong size.

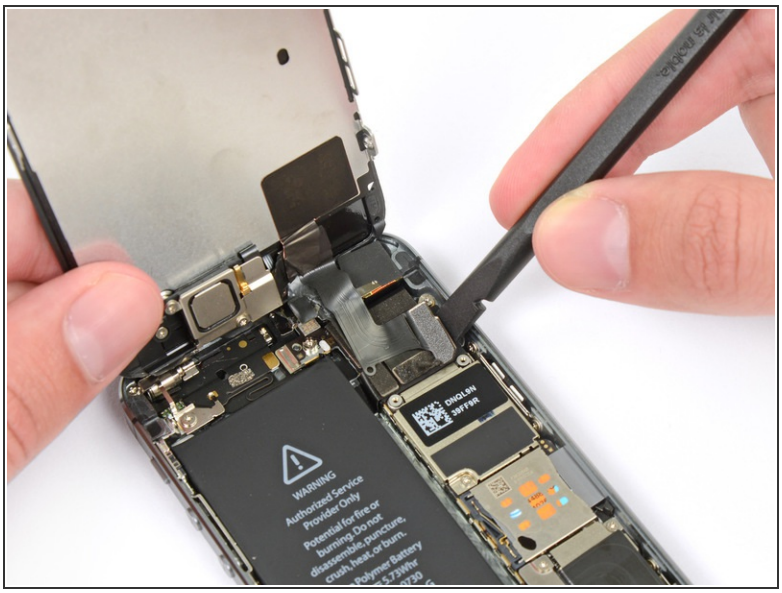
Step 18



- Remove the front panel assembly cable bracket from the logic board.

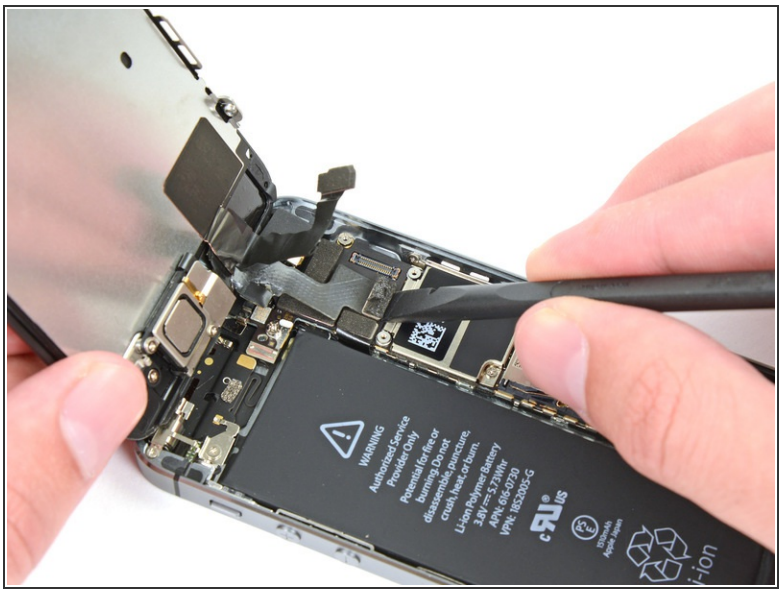
Step 19

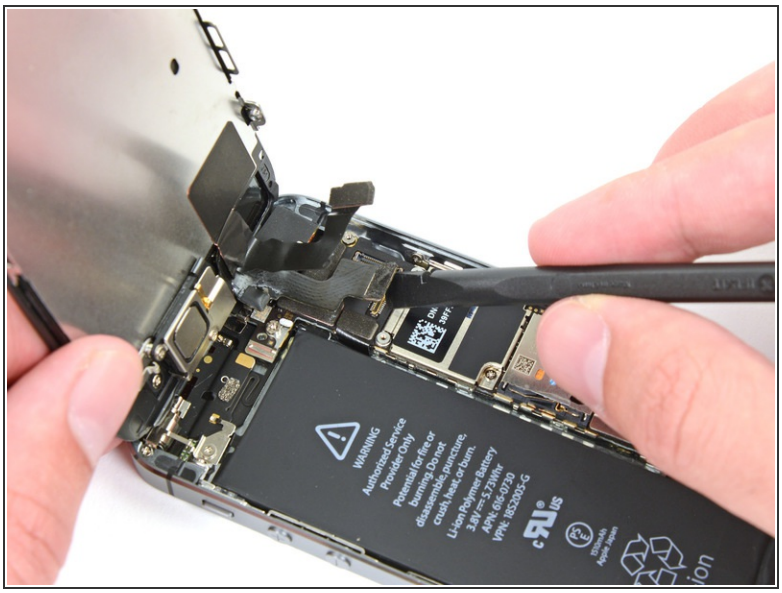




- Use the flat end of a spudger to disconnect the front-facing camera and sensor cable.

Step 20

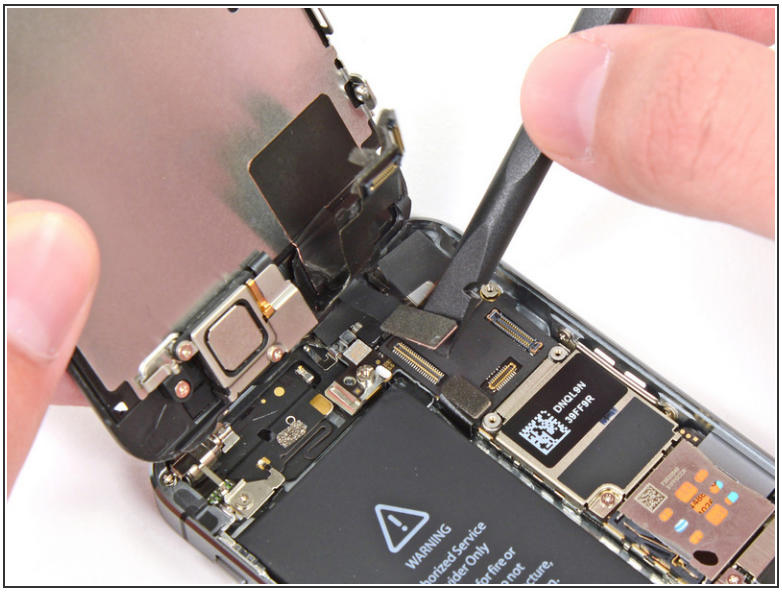




- While still supporting the front panel, disconnect the LCD cable connector.

When reassembling your phone, the LCD cable may pop off the connector. This can result in white lines or a blank screen when powering your phone back on. If that happens, simply reconnect the cable and power cycle your phone. The best way to power cycle your phone is to disconnect and reconnect the battery.

Step 21



- Finally, disconnect the digitizer cable connector.

Step 22

- Remove the front panel assembly from the rear case.

Step 23 — SIM Card

- Insert a SIM card eject tool or a paperclip into the small hole in the SIM card tray.
- Press to eject the tray. This may require a significant amount of force.

Step 24

- Remove the SIM Card tray assembly from the iPhone.

When reinserting the SIM card, ensure that it is in the proper orientation relative to the tray.

Step 25 — Logic Board

- Use a spudger to gently pry the button assembly cable up from its socket on the logic board.

Be very careful to only pry up on the connector and not the socket on the logic board. If you pry up on the logic board socket, you may break the connector entirely.

Step 26



- Use a spudger to pry the Lightning connector cable up from its socket on the logic board.
- Fold the Lightning connector cable out of the way of the logic board.

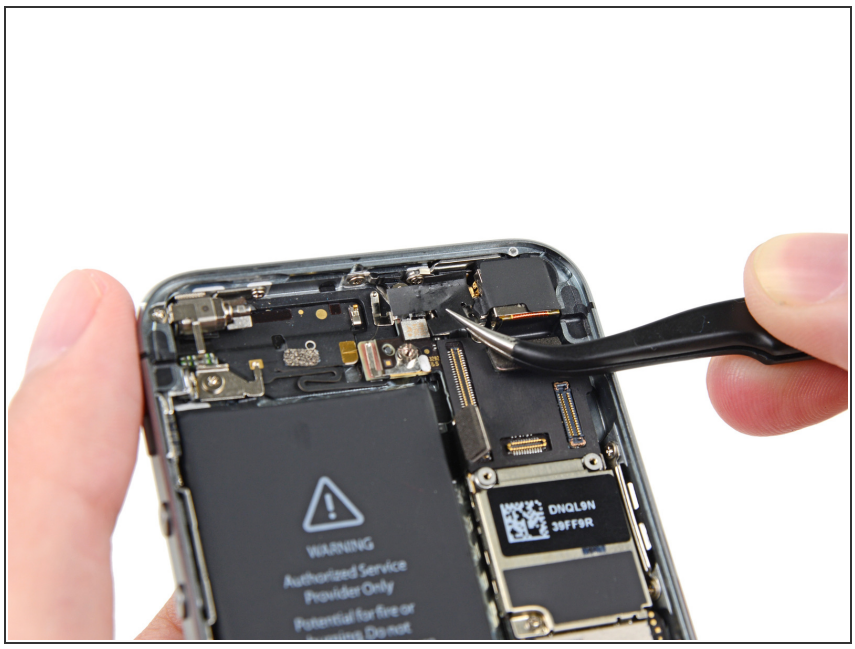
Step 27


- Use the tip of a spudger to pry the antenna cable up from its socket on the logic board.

Step 28

- Use the flat end of a spudger to disconnect the rear-facing camera cable from its socket on the logic board.

Step 29



- Remove any tape covering the camera flash bracket.

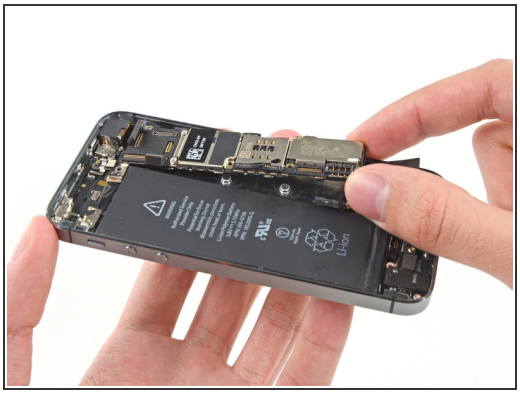
Step 30

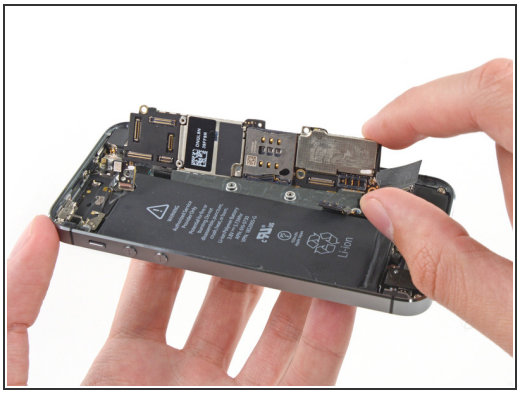
- Remove the following screws from the logic board:
  - One 2.4 mm Phillips #000 screw
    - This screw also holds a small metal contact beneath the logic board. It's held in place underneath a plastic bracket, but if you see it slipping out, refer to this step to remove it.
  - Two 2.3 mm Phillips #000 screws
  - Four 2.8 mm standoff screws
    - Use a small flathead screwdriver to remove these standoff screws.
    - During reassembly, you can use the tip of a spudger to get the standoff screw started.

Step 31


- Use a plastic opening tool to lift the logic board up enough to grab with your fingers.

Step 32



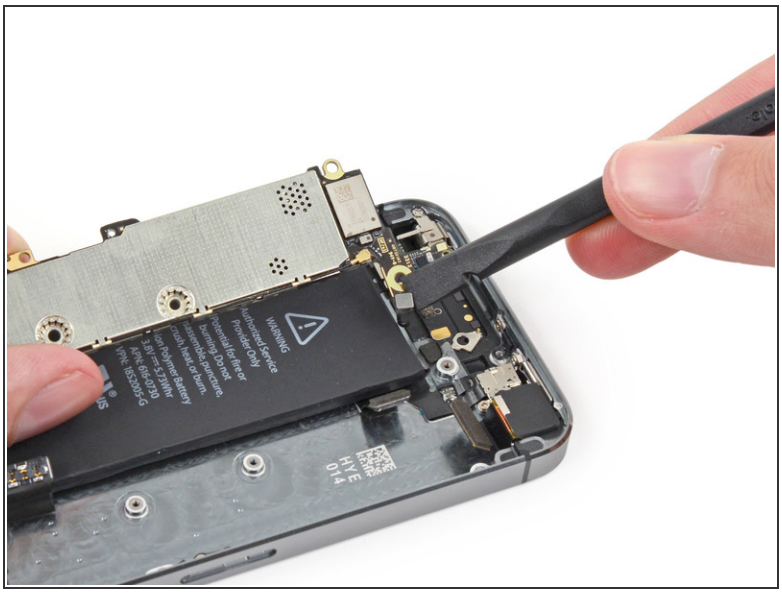


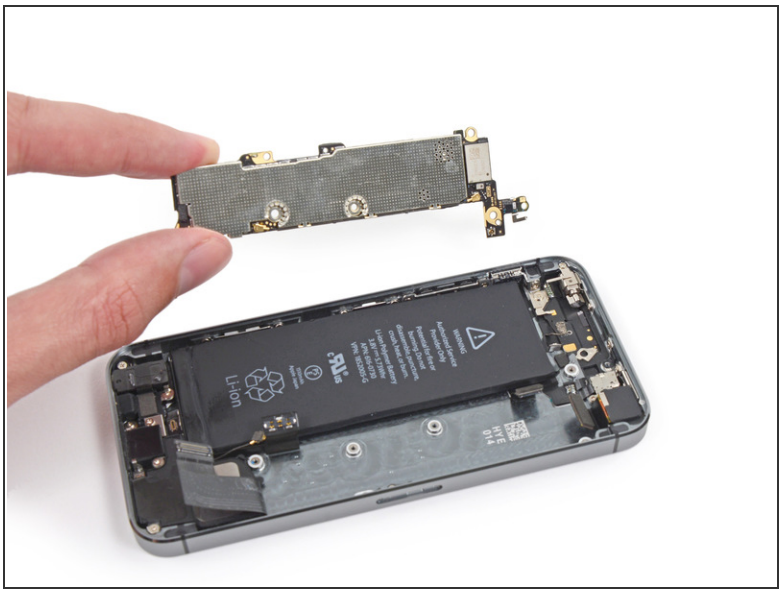
- Pull the logic board slightly away from the rear facing camera.

⚠ Do not try to remove the logic board just yet, as it is still connected by an antenna cable on the back.

- Flip the logic board toward the battery, as if you are turning the page in a book.

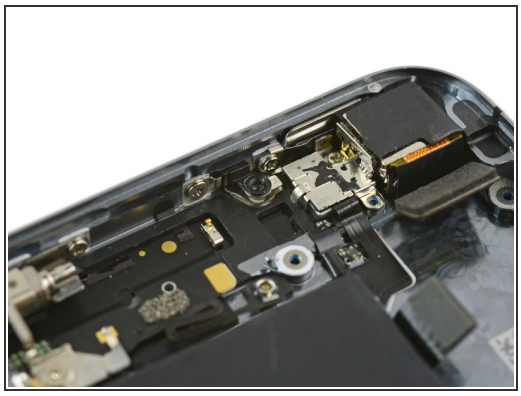
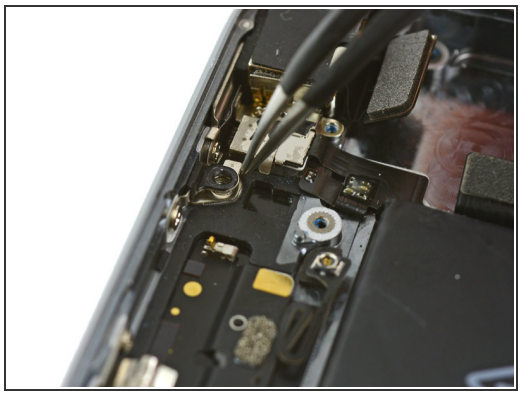
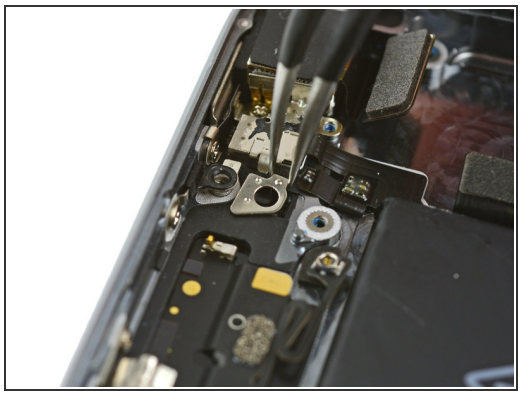
Step 33





- Use the flat end of a spudger to disconnect the antenna cable on the back of the logic board.
- Remove the logic board from the iPhone.

Step 34

- At this point, a small metal plate near the rear facing camera is loose and may come free from its recess.

Because it is very small and easy to lose, it's best to remove this plate and set it aside while you continue to work on your phone.

- Use tweezers to remove the plate from beneath the bracket to the left of the rear-facing camera.

When reassembling, orient the plate with the small tab to the right and the longest flat edge against the top of the phone.

To reassemble your device, follow these instructions in reverse order.

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